



Review Article

CHARAK SAMHITA: A TEXTBOOK OF ANCIENT RESEARCH METHODOLOGY

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ABSTRACT

Charak Samhita is the one of the identities of *Ayurveda*. To carry out any research, one needs to draw certain methodology, some kind of line of action. *Charak Samhita* shows us the path on that way. By studying *Charak Samhita* in a view to understand its research methodology, one finds it a textbook of Ancient Research Methodology itself. The method of precipitating a principle, methods of proving it i.e. *Panchavayavi Vakya* are studied here. Use of interrogation as a tool of collection of knowledge, importance of animal study is also discussed here. Sample size determination, minimal standard size, precipitation of higher and lower values, estimation of the best and the worst are mentioned in this topic. *Tantrayukti* to understand any science and *Vadmargapade* to prove one's view is also mentioned. Study of epidemiology, types of examinations with their limitations, cause effect relationship is also mentioned here. Thus it finds *Charak Samhita* as a very scientifically bound textbook.

KEYWORDS: *Panchavayavi Vakya*, Animal study, Sample size, *Tantrayukti*.

INTRODUCTION

Nowadays *Charak Samhita* has become an identity of science of life i.e. *Ayurveda*. It is one of the major treatises of *Ayurveda*, *Brihatrayi*. Some find it a collection of researches or some find it a textbook of *Ayurveda*. Researchers carry out researches on the concepts mentioned in it. To prove those concepts they draw some line of work, use their brains to find out research methodology, but if they search it in the *Charak Samhita* itself they will be pleased to know that *Charak Samhita* itself is a textbook of ancient research methodology.

Charak Samhita was completed in three different eras, by three authors. First comes *Maharshi Agnivesha*, his era is 1000 B.C., then comes *Acharya Charak* or a group of *Vaidyas* who redacted the *sutras* of *Agniveshatantra*. His or their era is 200 B.C. Lastly *Charak Samhita* was again redacted and completed by *Acharya Dridhabala* whose era is denoted as 400 A.D.^[1] Thus three researchers or scientists completed *Charak Samhita* in three different eras. Though three personalities worked on *Charak Samhita* in three different eras, the research methodology or the style of precipitation of a concept does not change in the text anywhere. It is indeed scientific paper writing. Without proper research methodology such type of synchronization is not possible.

NEED OF TOPIC

Today there is a dire need of research in *Ayurveda* as it has proved itself as a very effective system of medicine. Hence for researchers it is a challenge to prove its concepts on a perfect research methodology. The need of this topic is to search research methodologies mentioned in *Charak Samhita*, as it is the

oldest and most important treatise. *Charak Samhita* mentions that each and every concept or drug should be examined first, and then comes its application.^[2] *Charak Samhita* embeds such researches in it. So the study to know how those researchers of the era of B.C. did so or their research methodology is the main Aim of this study.

AIM AND OBJECTS

Aim

To study the research methodology of *Charak Samhita*.

Objectives

1. To study to prove a concept and establishment of *Siddhant*.
2. To study *Panchavayavi Vakya* on which whole study of a researcher depends.
3. To study animal study, interrogation method, minimum sample size, importance of number in research, *Tantrayukti*, *Vadmargapade* as a tool to research mentioned in *Charak Samhita*.

MATERIAL AND METHODOLOGY

Review work done and all literally references regarding research methodology were collected from *Charak Samhita*.

Precipitation of a *Siddhant*

To precipitate a principle or *Siddhant*, it needs a good and able team of researchers who examine the concept by various ways by applying various examinations and then finally conclude into precipitation of a *Siddhant* or Principle. Not a single person with some of the examinations is advised to precipitate a principle.^[3]

Method of Interrogation

To collect knowledge, one needs to read, learn and ask. To ask a question is to get knowledge. In *Charak Samhita* we find that *Acharya Agnivesha* and his friends would ask their teacher about various topics and their teacher *Acharya Atreya* would answer them. We find dialogue pattern of writing in *Charak Samhita*.^[4,5] We find it in the portion of *Agnivesha's tantra* not in *Acharya Charak's* explanation or *Acharya Drudhabala's* Additions. It is the peculiarity of *Charak Samhita* to get different types of writing skills as it is completed by three different authors.

Acharya charak has also called it a major tool in examination of a patient.^[6]

Charaka acharya also advices *Vaidyas* to know the name, quality, action of a particular drug. If not known then to ask *Ajapa*, *Avipa* and *Gop* (Cattle feeders).^[7]

Panchavayavi Vakya

Pachavayavi Vakya is the research methodology of ancient sciences. Ancient *Ayurved* researchers also followed this research methodology as well. *Panch Avayavi Vakya* includes *Pratidnya*, *Hetu*, *Drishtant*, *Upanay* and *Nigaman*.^[8]

Pratidnya is mentioning the topic which is to be established by various logical thinking and examinations by researcher.

Hetu is the examinations or the *Pramanas* which are going to apply to judge a *Pratidnya*. *Drishtant* is the explanations or the methods which are going to enlighten the minds of wise and others to understand the exact method of research.

Upanay is the process of logical thinking or to draw a conclusion logically. *Nigaman* is to draw or to present the final conclusion based on *Hetu*.

Charak Samhita follows this *Panchavayavi Vakya* system of research methodology to present self. *Charakacharya* denotes in the very first chapter of *Samhita Pratidnya* of *Charak Samhita's* writing. The verse says: The cause of this *Tantra* is *Dhatusamya kriya*.^[9] In the last chapter of *Charak* one verse is mentioned which says: One by studying it methodically acquires longevity, fame, health, three objects (virtue, wealth and enjoyment) in abundance and unique worldly success.^[10] Also a verse says: The discourse of sage *Atreya*, contained in one hundred and twenty chapters has been delivered by wise *Agnivesha* for the well-being of people.^[11] Thus the *Pratidnya* mentioned in first *Adhyay* of *Sutrasthan* is proved by the *Vakya Nigaman*. This verse is the *Nigaman* of *Charak Samhita*.

Charak Samhita mentions each and every concept on these *Panchavayavi Vakyas*. For example precipitating the concept of *Punarjanma* (rebirth) it says:

Pratidnya – *Dan*, *Tapah*, *Satya*, *Ahimsa*, *Brahmacharya* are the great sources of Salvation i.e. *Moksha*.^[12]

Hetu – To establish the concept of *Punarjanma*, *Acharya Charak* takes help of four *Pramanas* viz. *Agam*,

Pratyaksha, *Anuman* and *Yukti*. These four *Pramanas* are *Hetu*.^[13]

Drishtant – It gives examples of *Punarjanma* through all these four *Pramanas*, so that one should understand it by all ways.^[14]

Upanay – Thus one should pay attention to *Dharmacharan*, hence the concept of *Punarjanma* is established by four *Pramanas*.^[15]

Nigaman – Thus the concept of *Punarjanma* is proved.^[16]

Animal Study

To study the toxicity and action of a particular drug, to prove the medicinal effect of any drug, any researcher first opts an animal study. Animal trial should be carried out and its conclusions be studied prior to application of that drug. Animal study was also done at the time of *Charak Samhita*. We find the references in *Charak Samhita* as well. *Charakacharya* advices that the unknown drug and the bad administration of a known drug leads to miseries^[17] just like a poison, a weapon, a fire and the *Graha Shani* (Saturn) the unknown drug acts i.e. Threat to life but if well known then it is a nectar for life.^[18] These verses advices *Vaidyas* to know the efficacy and poisonous nature of any drug before administration. To know the drugs, help of animals is much important. *Charakacharya* explains *Vishavaeg*, *Vishalakshane* (effect of poison) in birds and animals. It directs us towards animal study.^[19] Use of birds and animals to examine poison in food is mentioned. If the flies sitting on food die, make the crow feeble voiced and depigments the eyes of *Chakora* (a bird) then it is poisonous.^[20] *Charakacharya* uses birds and animals to diagnose the patient also. In *Prameha*, ants running after the urine of a person^[21] and in *Kushtha*, worms consume *Kleda* i.e. Body parts^[22] suggest us towards their diagnosis. Also to know the prognosis of a patient, observation of birds and animals is mentioned. If flies, lice, mosquitoes are leaving a person's body then he should be known as *Mumursu* i.e. *Gatatu* (whose life is not remained).^[23] The same way if flies attract towards a person then he is *Gatayu*.^[24] If a crow or a dog consumes *Vamita Rakta* then it is *Jivadan* and if it does not then it is *Raktapitta*.^[25]

Charak Samhita does not merely tell us about the treatment of human being but it also guides us on the treatment of animals also. A detailed study of *Basti* in animals is found in *Siddhisthan*. Without animal trial and observations such type of detailed treatment can't be mentioned. It mentions *Bastiputak*, *Bastinetra*, *Bastidravys* for various animals.^[26]

Laboratory tests

If a person's stool, semen and sputum sink in water then *Vaidya* should know that patient's life span is no more. Multicolored sinking sputum is the sign of *Gatayu*.^[27] If the poison is put in a drink it develops blue lines, abnormal colour, one does not see his image or sees deformed image in it and there is excessive frothing on addition of salt.^[28] If poisonous food is kept in utensils, it becomes devoid of normal colour.^[29]

The food having doubt of poison should first be put in fire. The flame of fire acquires various abnormal

colors in contact of poisonous food. The flames become of variegated colour like those of peacock's feathers with intense, intolerable and rough smoke with cadaverous odour, bursting with sound, has one sided movement and is diminished in intensity.^[30]

Standardization of sample size

As *Charak Samhita* itself is a book of research methodology it denotes the minimal sample size also. That sample size could be in respect of days, patients, doze of a drug or food. One should consume food according to his nature of *Agni* and in proper *Matra*.^[31] It is also a sample size.

Snehan (oleation) should not be applied after seven days. Then it becomes habitual to the body. In *Krurakoshtha* apply *Snehan* for 07 days and in *Mrudukoshtha* for 3 days.^[32]

Sansarjankramakal according to *Shuddhi-* for *Pravar* 7 days, *Madhyam* 5 days and *Avar Shuddhi* 3 days be applied.^[33]

In *Vatajaroga* 09-11*bastis* be applied, in *Pittajvyadhi* 05-07 and in *Kaphajvyadhi* 01-03 *Bastis* be given.^[34] *Karmabasti* be given in 30, *Kalbasti* be given in 16, *Yogbasti* be given in 08 number.^[35]

Importance of Number in Research

Number plays a major role in any research. To draw inferences and conclusions study of numbers is must. *Charak Samhita* also claims at the importance of number. For ex. *Tridosha*, *Panchamahabhuta*, *Shat rasa*, *Nanatmaj Vyadhi*, *Discussion of Vyadhis* according to its number, types of *Swedana*.

Tantayukti

Tantrayukti are the devices of any *Shastra* to understand it wholly. A Sun is for the lotus and lamp for the house so are the devices of the treatise serving the purpose of amplification and enlightening.^[36] Even studying various treatises a physician does not grasp their ideas without devices of treatise as one does not acquire wealth on loss of fortune.^[37] They are 36 in number. These not only explain meanings of same word used in more than one places but same meaning of different words.

Vadmargapade

They are mainly mentioned to prove the point scientifically. They are mainly mentioned about how to conduct scientific discussions. To acquire knowledge *Adhyayana* (~Learning), *Adhyapan* (~Teaching) and *Tadvitsambhasha* (~scientific discussions) are the three sources.^[38] *Tadvitsambhasha* includes discussion on various topics by eminent scholars. These eminent scholars put forward their views on a certain topic and cross question other's views. It is expected to become *Sandhay* (~healthy scientific discussions). It has been advised to avoid *Vigruhya* (~Aggressive) *Sambhasha*. *Vigruhyasambhasha* can lead to *Jalpa* (~quarreling) or *Vitanda*. (~irrelevant discussions). In such type of discussions to put forward one's views researcher should know the scientific techniques to put self-thoughts ahead and cross others. Those scientific

techniques are called as *Vadmargapade*. Total 44 *Vadmargapade* are mentioned in *Charak Samhita*.^[39]

Conclusions and decisions drawn from conferences

To discuss important issues and topics conferences were called. All the eminent scholars put forward their views, discussed and finally drew the conclusion of a particular topic. This was the nature of conferences at the time of *Charakacharya*. In *Charak Samhita* we find discussions on various subjects like *Rasa* and *Aahar*, symposium on origin of Man and his diseases, *Svabhavaoparamvad*, symposium on *Vata Dosha*, controversy about the utility of four limbs of treatment. Conferences and Symposiums are the tool to gather intellectuals to share their knowledge for the society.

Types of Examinations

Charakacharya denotes four types of examinations to examine anything. They are *Aptopadesh* (~mentioned by reliable source of knowledge) *Pratyaksha* (~Knowledge gained by ones own individual observations) *Anuman* (~Inferences) and *Yukti* (conclusions drawn on the basis of all examinations.)^[40, 41] These all examinations are mentioned with their limitations.^[42] Certainly it leads us to the confidence level of any research.

Study of Epidemiology

Study of epidemiology includes air pollution, water pollution, soil pollution and *Kal* pollution. Causes, effects and possible remedies are discussed in *Charak Samhita*. It also mentions its severity as epidemic causes a wide life threat.^[42] It is called as *Janapadodhwansa*.

Cause effect relationship

Every disease has a certain cause. Without cause no disease can happen. Be the cause *Purvajanmakrut Papkarma* (sins or misfortunes) or *Trividahkaran* (three major causes of a diseases deorientation in sense organs, wrong works done by mind and seasonal changes).^[43]

Estimation of limits: *Charakacharya* denotes the best and the worst which is nothing but estimation of limits. *Charakacharya* mentions it in reference to eatables also.^[44]

Rejuvenation: *Charakacharya* discusses role of *Ahar* and *Agni* in *Dhatunirman* and causes of *Dhatudushti*, which is rejuvenation procedure of our body through *Ahar* (food).^[45]

CONCLUSION

Charak starts with *Pratidnya* and ends with *Nigaman*, all concepts, even diseases and their treatments, drugs from *Kalpasthan* are also mentioned in such manner. It shows that *Panchavayavi Vakya* are *Charak Samhita's* research methodology. The definition of *Siddhant* is very much perfect. Use of birds and animals in diagnosis, making prognosis, in drug trial, as an examination for poison in food leads us towards animal study. Even laboratory tests are mentioned in it. Standardization of a sample size shows us its research methodology. Importance of number to carry out a research, *Vadmargapade* to prove one's thought and *Tantrayuktis* to understand any science. Importance of

conferences to acquire knowledge shows its scientific approach and thirst for knowledge. Types of examinations, study of epidemiology, estimation of limits, cause effect relationship leads us to scientific approach of *Charak Samhita*.

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